

# Installing the Entire Screen Builder Server in the UNIX Environment

You only have to install the Entire Screen Builder Server in a UNIX environment if you do not want to install it under Windows.

In order to install Entire Screen Builder successfully, you must have superuser (root) rights.

The setup program checks for existing Entire Screen Builder Version 4.3.1 and 5.1.1 installations. If such an installation is detected, the setup program offers the option to update to the new version and remove the existing version. It is recommended that you remove the existing version. To do so, you have to stop the Entire Screen Builder Server; otherwise, the existing version cannot be removed. Before starting the installation, it is therefore recommended that you inform all connected users (for example, with the Send Message function in the System Management Hub) and close all Entire Screen Builder viewers.

This chapter covers the following topics:

- Differences between the Windows and UNIX Versions
- Prerequisites
- License Files
- Setting Up the Entire Screen Builder Server
- Starting and Stopping the Entire Screen Builder Daemon
- Activating Entire Screen Builder at System Startup
- Entire Screen Builder Server Directories
- Working with the Entire Screen Builder Server in the UNIX Environment
- Deinstalling the Entire Screen Builder Server

See also: *Updating Manually Deployed Files on the HTTP Server.*

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## Differences between the Windows and UNIX Versions

The following table lists the differences between the UNIX and Windows versions of the Entire Screen Builder Server.

	Windows	UNIX
<b>Server configuration information</b>	Stored in the Windows registry.	Stored in the file <i>ewvreg.reg</i> . The environment variable WINREG_FILE points to this file.
<b>Event log</b>	Stored in the Windows Event Viewer.	Stored in the file <i>ewvserver.txt</i> which is located in the directory <i>\$EWVDIR/\$EWNODE/events</i> .

## Prerequisites

<b>Server</b>	Sun Solaris Version 8 (64 bit) or 9 (64 bit).
<b>System Management Hub</b>	Software AG's System Management Hub Version 3.3.1.2 or above. For supported browsers, see the System Management Hub documentation.
<b>Tunneling</b>	<p>For tunneling, you can use the following HTTP server:</p> <ul style="list-style-type: none"> <li>● Apache Web Server Version 1.3 and 2.0 for Solaris (32 bit and 64 bit).</li> </ul> <p>See <i>HTTP Tunneling</i> for further information.</p> <p>If tunneling is not used, you can use any HTTP server.</p>

The prerequisites for the presentation clients are listed in the section *Prerequisites for Windows*.

### Note:

See also: *readme-ux.txt* in the `\unix\sun\ewv\v5nn` directory of the Entire Screen Builder CD.

## Operating System Settings

The default value for "Maximum number of file descriptors" on Solaris 8 and 9 systems is 256. You may have to adjust this limit for your installation.

The Entire Screen Builder Server needs at least 2 file descriptors per connection (one socket for the connection to the viewer and another one for the connection to the host). It may need more file descriptors in specific situations. You can use the following rule:

**MaximumNumberOfFilesDescriptors = (MaximumNumberOfClientsExpected \* 2)+100**

If tunneling is used, the Entire Screen Builder Server needs at least 3 file descriptors per connection. Use the following rule then:

**MaximumNumberOfFilesDescriptors = (MaximumNumberOfClientsExpected \* 3)+100**

Please ask your system administrator to change the maximum number of file descriptors in your system.

## License Files

During the installation, you will be asked to provide a license key. You should have a license key that is provided by Software AG either on a storage medium such as a diskette in the Entire Screen Builder distribution kit or by email.

Depending on the license file you specify during installation, one of the following is installed:

License File	Description	Type of Environment
EWV $nnn$ .xml	Entire Screen Builder GUI Version.	Production environment.
ETV $nnn$ .xml	Entire Screen Builder Terminal Version.	Production environment.
EMV $nnn$ .xml	Entire Screen Builder XML Version.	Production environment.

### Note:

The Entire Screen Builder Server can only be installed as a production environment version under UNIX. The development environment version (SDK) is only available for Windows platforms.

If you want to install all versions, you have to install one version first. Then start the installation once more. You can then select the license file for the desired product. As a result, the product is installed and the directories for the corresponding viewers are created.

# Setting Up the Entire Screen Builder Server

Setting up the Entire Screen Builder Server on UNIX consists of the following steps:

- Step 1: Stop the Entire Screen Builder Server
- Step 2: Establish the Environment and Install the Product

## Step 1: Stop the Entire Screen Builder Server

This step is only required, if there is a previous version of the Entire Screen Builder Server under UNIX. In this case, you have to stop the Entire Screen Builder Server and the System Management Hub as described below.

Stop the Entire Screen Builder Server in one of the following ways:

- Recommended. Stop the Entire Screen Builder Server from the System Management Hub. See *Starting and Stopping the Entire Screen Builder Server* in Entire Screen Builder's *System Management Hub* documentation.
- Invoke the shell script *ewvserver.sh* from the command line:

```
ewvserver.sh stop
```

Stop the System Management Hub after the Entire Screen Builder Server has been stopped:

- Use the script *argsrvs.bsh* which is located in *../common/arg/bin*. This script can be used for both starting and stopping the System Management Hub.

## Step 2: Establish the Environment and Install the Product

Read the file *setup\_ux.txt* in the root directory of the Entire Screen Builder CD. Follow the instructions in this file in order to establish the environment for installing Software AG products and to install the product. The Entire Screen Builder-specific settings are shown below:

<b>EWVDIR</b>	Home directory for the product.
<b>EWVVERS</b>	Current version of the product.
<b>EWVNODE</b>	Name of the node on which Entire Screen Builder is installed.
<b>WINREG_FILE</b>	Contains the configuration file used by the server.
<b>LD_LIBRARY_PATH</b>	Must point to <i>\$EWVDIR/\$EWVVERS/bin</i> .

Complete the environment settings as specified in the file *sagenv.new* which is created during installation in the root directory of the Software AG products. When you have set the environment variables for Entire Screen Builder, you either have to start the System Management Hub daemons or, if the System Management Hub was already installed, you have to restart them. Use the script *argsrvs.bsh* from */common/arg/bin* to do this.

Verify the correct installation of the application as follows:

- Invoke the System Management Hub and create a new session (for example, Telnet TN3270). See *Host Sessions* in Entire Screen Builder's *System Management Hub* documentation.
- Start the Entire Screen Builder Server from the System Management Hub. See *Starting and Stopping the Entire Screen Builder Server* in Entire Screen Builder's *System Management Hub* documentation.
- From a Windows PC, open the HTML page <http://UnixServer/ESB/webviewer/ExampleAdministratorPage.htm> with the Microsoft Internet Explorer to start the Entire Screen Builder Web Viewer.
- When the Entire Screen Builder Web Viewer is shown in the Internet Explorer, specify all required information and choose the **Connect** button. For a default installation, it is sufficient when you specify the name of the host on which the Entire Screen Builder Server has been installed in the **ESB Server** text box.
- If you want to use the Server Management, you also have to start the Entire Screen Builder daemon. See *Starting and Stopping the Entire Screen Builder Daemon*.

## Starting and Stopping the Entire Screen Builder Daemon

The Entire Screen Builder daemon is responsible for accepting the commands from the Server Management (which is a Microsoft Management Console snap-in).

When you start the Entire Screen Builder daemon for the first time, you have to change the owner and permission for the daemon as follows:

1. Change to *\$EWVDIR/\$EWVERS/INSTALL*.
2. Change to superuser (su or sudo).
3. Execute the script *ewvsudo.bsh*.

To start the Entire Screen Builder daemon:

```
ewvdaemon.sh nodename port-number start
```

Example using the default port number:

```
ewvdaemon.sh sunhost 22390 start
```

To stop the Entire Screen Builder daemon:

```
ewvdaemon.sh nodename port-number stop
```

Example:

```
ewvdaemon.sh sunhost 22390 stop
```

Please note that the same port number used to start the Entire Screen Builder daemon must be configured in the Server Management snap-in (the name of the corresponding option is **The computer is a UNIX system with a daemon port**). See *Defining the Entire Screen Builder Server* in the *Server Management* documentation for further information.

## Activating Entire Screen Builder at System Startup

This section describes how to configure the UNIX system for starting Entire Screen Builder automatically during system startup.

The following table shows where the *init.d* and *rc3.d* directories are located on Solaris systems. In the following descriptions, *init.d* or *rc3.d* stand for the relevant path indicated below.

System Directory for Initialization	Run Level Startup Directory
<i>/etc/init.d</i>	<i>/etc/rc3.d</i>

The *rc3.d* directory contains several Bourne shell scripts that start with "S" and "K", followed by a number, for example "99". If you add a file to this directory, the code contained in it is executed when the system changes to "multi-user mode". The Bourne shell scripts that start with "S" are called by the UNIX system when the system is going up. The Bourne shell scripts that start with "K" are called by the UNIX system when the system is going down.

The following topics are covered below:

- Preparing the System V Style Startup Procedures for Entire Screen Builder
- Changing the System Management Hub Startup Procedure for Entire Screen Builder

## Preparing the System V Style Startup Procedures for Entire Screen Builder

Entire Screen Builder provides two procedures for starting its servers at system startup. These are automatically unpacked to the *\$EWVDIR/\$EWVVERS/INSTALL* directory during the Entire Screen Builder installation process.

Procedure	Description
<i>sagewvsrv</i>	Used to invoke the Entire Screen Builder Server during system startup.
<i>sagewvdmn</i>	Used to invoke the Entire Screen Builder daemon during system startup.

Samples of the procedure files are shown below. They can be edited with a text editor.

Log in as user "root".

Copy the above two procedures to the *init.d* directory of your UNIX machine.

Check the environment variable settings (SAG, EWVVERS, EWVADM) in the two procedures.

<b>EWVDIR</b>	Location where Entire Screen Builder has been installed.
<b>EWVVERS</b>	Entire Screen Builder version number.
<b>EWVADM</b>	The login name of the Entire Screen Builder system administrator. It is assumed that this administrator account is called "sag" and that the user ID is already known to the system. It does not have to be a user with root privileges.

### Note:

The Bourne shell does not allow blanks before and after the equal sign in the lines to be customized.

Go to the *rc3.d* directory.

Create backup copies of the current procedure files *S99ewvsrv* and *S99ewvdmn* in the *rc3.d* directory.

Copy the files starting with "sag" (for example, *sagewvsrv*) from the *init.d* directory to the *rc3.d* directory and rename them so that they start with "S99" (for example, *S99ewvsrv*).

Copy the files starting with "sag" from the *init.d* directory to the *rc3.d* directory once more and rename them so that they start with "K99" (for example, *K99ewvsrv*).

If an error occurs, you can start again with the backup copies after the deletion of the modified "S99" and "K99" files contained in the *rc3.d* directory.



## Sample of the *sagewvsrv* File

```
#!/bin/sh
#
# Copyright (c) 2002 Software AG, Germany. All rights reserved.
#
# Start/stop script for Entire Screen Builder server
#
#####
EWVDIR="/usr/SAG/ewv"
EWVVERS="v521"
EWVADM="sag"
. $SAG/ewv/$EWVVERS/INSTALL/ewvenv
ewvserver=$EWVDIR/$EWVVERS/bin/ewvserver.sh
#
#-----
#
case "$1" in
    start)
        echo "Starting Entire Screen Builder server ..."
        if [ -x "${ewvserver}" ] ; then
            su $EWVADM -c "${ewvserver} start" > /dev/console 2> /dev/console
        else
            exit 1
        fi
        echo "done..."
        ;;
    stop)
        echo "Stopping Entire Screen Builder server ..."
        if [ -x "${ewvserver}" ] ; then
            su $EWVADM -c "${ewvserver} stop" > /dev/console 2> /dev/console
        else
            exit 1
        fi
        ;;
    *)
        echo "Usage: $0 {start|stop}"
        exit 1
        ;;
esac
#
#-----
#
```

## Sample of the *sagewvdm* File

```
#!/bin/sh
#
# Copyright (c) 2002 Software AG, Germany. All rights reserved.
#
# Start/stop script for Entire Screen Builder daemon
#
#####
EWVDIR="/usr/SAG/ewv"
EWVVERS="v521"
EWVADM="sag"
. $EWVDIR/$EWVVERS/INSTALL/ewvenv
ewvdaemon=$EWVDIR/$EWVVERS/bin/ewvdaemon.sh
#
#-----
#
case "$1" in
    start)
        echo "Starting Entire Screen Builder daemon ..."
        if [ -x "${ewvdaemon}" ] ; then
            su $EWVADM -c "${ewvdaemon} start" > /dev/console 2> /dev/console
        else
            exit 1
        fi
        echo "done..."
        ;;
    stop)
        echo "Stopping Entire Screen Builder daemon ..."
        if [ -x "${ewvdaemon}" ] ; then
            su $EWVADM -c "${ewvdaemon} stop" > /dev/console 2> /dev/console
        else
            exit 1
        fi
        ;;
    *)
        echo "Usage: $0 {start|stop}"
        exit 1
        ;;
esac

#
#####
#
```

## Changing the System Management Hub Startup Procedure for Entire Screen Builder

The procedure *sagarg* which is used to invoke the System Management Hub during system startup must be changed to set the Entire Screen Builder environment before the System Management Hub is started.

A sample of the procedure file is shown below. It can be edited with a text editor.

Log in as user "root".

Create a backup copy of your current *sagarg* file contained in the *init.d* directory.

Add the lines to the *sagarg* file which are indicated in bold in the sample file below.

**Note:**

The Bourne shell does not allow blanks before and after the equal sign in the lines to be customized.

If an error occurs, you can start again with the backup copy after the deletion of the modified *sagarg* file contained in the *init.d* directory.

## Sample of the *sagarg* File

You have to add the lines indicated in bold (where */usr/SAG* is the path to the directory in which Entire Screen Builder has been installed).

```
#!/bin/sh
#
# Copyright (c) 2003 Software AG, Germany. All rights reserved.
#
# Start/stop script for System Management Hub - Server
#

SAG="/usr/SAG"
export SAG
. "/usr/SAG/common/arg/INSTALL/argenv" > /dev/null
. "/usr/SAG/ewv/v521/INSTALL/ewvenv" > /dev/null

SAGUSER="sag"
PIDFILE="$ARGDIR/var/argsrv.lock"

case "$1" in
  start|resume)
    echo "Starting Software AG System Management Hub - Server..."
    # First check if the pidfile had become stale...
    if [ -r "$PIDFILE" ] ; then
      ps -fp `cat "$PIDFILE"` | tail "+2" > /dev/null 2>&1 || {
        rm $PIDFILE
      }
    fi
    if [ -r "$PIDFILE" ] ; then
      echo "argsrv still running ... not started."
    else
      if [ -x "$ARGDIR"/bin/argsrv ]; then
        su $SAGUSER -c "/bin/sh -c '""'\" \
          . \"$SAG\"/common/arg/INSTALL/argenv > /dev/null; \
          ./usr/SAG/ewv/v521/INSTALL/ewvenv > /dev/null; \
          cd \"$ARGDIR\"/bin; ./argsrv -pid \"$PIDFILE\"'""' "
      else
        exit 1
      fi
    fi
    echo "done..."
    ;;
  stop|pause)
    echo "Stopping Software AG System Management Hub - Server..."
    case "$1" in pause) SIG=3 ;; *) SIG=15 ;; esac
    kill -$SIG `cat "$PIDFILE"`; rm -f "$PIDFILE"
    echo "done..."
    ;;
  *)
    echo "Usage: $0 {start|resume|stop|pause}"
    exit 1
    ;;
esac
```

## Entire Screen Builder Server Directories

The following directories are created when Entire Screen Builder is installed in the UNIX environment:

Directory	Description
<i>ewv</i>	Top-level directory.
<i>v5xxx</i>	Directory with all components for the current Entire Screen Builder version.
<i>v5xxx/INSTALL</i>	Shell scripts and environment files to install the product.
<i>v5xxx/bin</i>	Entire Screen Builder executable and library files.
<i>v5xxx/conf-templates</i>	Template files ( <i>ewvreg.reg</i> and <i>ewvargus.reg</i> ).
<i>v5xxx/data</i>	Configuration file <i>nswconfig.xml</i> .
<i>v5xxx/doc</i>	Online documentation.
<i>v5xxx/images</i>	Images for the System Management Hub.
<i>v5xxx/samples</i>	Miscellaneous samples for user exits and scripts.
<i>v5xxx/samples/sampleconf</i>	Demo application and samples.
<i>v5xxx/samples/samplenattransfer</i>	Sample programs for data transfer with Natural.
<i>v5xxx/samples/samplescripts</i>	Sample Java Scripts.
<i>v5xxx/samples/sampleuserexit</i>	Sample user exits.
<i>v5xxx/tables</i>	Translation tables.
<i>v5xxx/terminalviewer</i>	Only installed for the Entire Screen Builder Terminal Version. <i>NSWTerminalViewer.cab</i> and <i>ExampleTerminalViewer.htm</i> .
<i>v5xxx/webviewer</i>	Only installed for the Entire Screen Builder GUI Version. <i>NWWClientFull.cab</i> , <i>ExampleAdministratorPage.htm</i> and <i>ExampleEndUserPage.htm</i> .
<i>v5xxx/windowsviewer</i>	Only installed for the Entire Screen Builder GUI Version. <i>EwvViewer.exe</i> .
<i>v5xxx/xml</i>	XML templates for the System Management Hub.
<i>systemname</i>	Directory with the specific configuration for this node.
<i>systemname/configuration</i>	Configuration file <i>ewvreg.reg</i> .
<i>systemname/data</i>	Configuration file <i>nswconfig.xml</i> with information on the defined host sessions (including key schemes and color schemes) and the <i>profiles</i> folder with information on the defined user and group profiles. All of this information is defined with the System Management Hub.
<i>systemname/events</i>	The file <i>ewvserver.txt</i> with information on each event that occurred on the server.
<i>systemname/logs</i>	Log files.

Directory	Description
<i>systemname/repository</i>	Rules repository.
<i>systemname/scripts</i>	Script files. The two subfolders for production and test purposes are empty after installation.
<i>systemname/tables</i>	Translation tables for the current system.
<i>systemname/temp</i>	For internal use. Empty after installation.
<i>systemname/traces</i>	Traces files when the server is running in trace mode.
<i>systemname/xmlrepository</i>	Files for the XML Version. Empty after installation.

*systemname* is the name of the machine. This directory is created automatically during the installation. The folders and files in *systemname* are the working folders and files used by the Entire Screen Builder Server and the administration tool at runtime.

## Working with the Entire Screen Builder Server in the UNIX Environment

In the UNIX environment, the Entire Screen Builder Server works only in production mode. This means that the rules have to be created with the Entire Screen Builder SDK under Windows.

Once the rules have been created, you must copy the entire repository (*defaults.ini*, *\*.bdd*, images etc., including all subdirectories) to the directory *\$EWVDIR/\$EWNODE/repository* in the UNIX file system.

Since UNIX distinguishes between lowercase and uppercase, each file name in the repository must be in lowercase. To convert all file names to lowercase, change to the directory *\$EWVDIR/\$EWNODE/repository* and run the shell script *up2lofn.sh*.

To use the new rules, you have to stop the Entire Screen Builder Server and then start it again. See *Starting and Stopping the Entire Screen Builder Server* in Entire Screen Builder's *System Management Hub* documentation.

## Deinstalling the Entire Screen Builder Server

To deinstall the Entire Screen Builder Server in the UNIX environment, go to the \$SAG environment and run *sagrm*. Select all items to be deinstalled in the resulting screen.